

## **Claims**

1. A method of forming a cladding for being disposed about the core of an optical article, comprising the steps of:
  - providing an elongate glass article;
  - adhering a layer of soot to the elongate glass article for forming a portion of the cladding so as to be disposed about the core when present;
  - sintering the layer of soot to form a first sintered layer including voids that are at least one of empty or comprising a gas;
  - adhering a different layer of soot to the elongate glass article for forming a different portion of the cladding so to be disposed about the core when present;
  - sintering the different layer of soot to form a different sintered layer substantially free from voids; and
  - disposing a second cladding about the cladding, the second cladding comprising an index of refraction lower than an index of refraction comprised by the cladding.
2. The method of claim 1 including drawing the elongate glass article into a glass fiber.
3. A method of forming a cladding for being disposed about the core of an optical article, comprising the steps of:
  - providing a hollow elongate glass article;
  - adhering a layer of soot to a surface of the elongate glass article for forming a portion of the cladding so as to be disposed about the core when present;
  - sintering the layer of soot to form a sintered layer including voids that are at least one of empty or comprising a gas;
  - providing a second elongate glass article for providing one of at least a portion of the core and a different portion of the cladding where the different portion is substantially free of voids; and
  - oversleeving one of the glass articles with the other of the glass articles.

4. The method of claim 3 including drawing the oversleeved glass articles into a glass fiber.
5. A method of forming a cladding for surrounding the core of an optical article, comprising the steps of:
  - providing an elongate glass article;
  - adhering a layer of soot to the elongate glass article for forming a portion of the cladding so as to be disposed about the core when present;
  - sintering said layer of soot to form a first sintered layer of the cladding;
  - adhering a different layer of soot to the elongate glass article for forming a different portion of said cladding so as to be disposed about the core when present;
  - exposing only the different layer of soot to a selected material in the form of a gas or liquid for absorption by the different layer of soot; and
  - sintering the different layer of soot to form a second sintered layer of said cladding.
6. The method of claim 5 including drawing the elongate optical fiber into a glass fiber.
7. A method of forming a cladding disposed about the core of an optical article, comprising the steps of:
  - providing an elongate glass article;
  - adhering a layer of soot to the elongate glass article for forming a portion of the cladding so as to be disposed about the core when present;
  - distributing particles having an index of refraction different than the index of refraction of the soot with the layer of soot; and
  - sintering the soot layers.
8. The method of claim 7 including drawing the elongate glass article to form a glass fiber.

9. A method of forming a cladding for being disposed about the core of an optical article, comprising the steps of:
- providing a hollow elongate glass article;
  - adhering a layer of soot to the inside of the elongate glass article for forming a portion of the cladding so as to be disposed about the core when present;
  - exposing the layer of soot to a selected material in one of a gas and liquid form for absorption by the soot;
  - sintering the soot;
  - providing a second glass article for providing one of at least a portion of the core and a different portion of the cladding; and
  - oversleeving one of the glass articles with the other of the glass articles.
10. The method of claim 9 including drawing the glass articles into a glass fiber.
11. A method of forming an elongate optical article having a core and a cladding disposed about the core, the cladding having an index of refraction that is less than the index of refraction of the core, comprising the steps of:
- providing an elongate glass article;
  - adding glass to the article for forming a first part of the cladding so as to be disposed about the core when present, the added glass including discrete regions having a different index of refraction than the added glass; and
  - adding glass without discrete regions to the elongate glass article for forming another part of the same cladding so as to be disposed about the core when present.